

b.) Amendments to the Claims:

The following is a list of the claims pending as of this response with appropriate status identifiers.

1. – 6. (canceled).

7. (previously presented) A vertebral disc prosthesis for implantation in a patient, said prosthesis comprising

at least one surface of cross-linked polyethylene; and,

at least one component formed of zirconium or zirconium alloy and having at least one surface of diffusion-bonded blue-black or black oxidized zirconium,

wherein said at least one surface of cross-linked polyethylene articulates against said at least one surface of diffusion-bonded blue-black or black oxidized zirconium.

8. (previously presented) The vertebral disc prosthesis of claim 7 further comprising:

two prosthesis plates; and,

a prosthesis core

said prosthesis core articulating against at least one of said two prosthesis plates permitting a rotational movement around a vertical axis.

9. (previously presented) The vertebral disc prosthesis of claim 7 wherein said surface of diffusion-bonded blue-black or black oxidized zirconium is from about 1 to 20 microns thick.

10. (previously presented) The vertebral disc prosthesis of claim 7 wherein said surface of diffusion-bonded blue-black or black oxidized zirconium is from about 1 to 5 microns thick.

11. (currently amended) The vertebral disc prosthesis of claim 7 wherein said at least one component comprises an irregular surface structure adapted to accommodate tissue in-growth on a portion of said at least one component ~~the prosthesis body~~.

12. (currently amended) The vertebral disc prosthesis of claim 11 wherein the irregular surface structure comprises beads attached to the outer surface of said at least one component ~~the prosthesis body~~, wherein at least a portion of the surface of the beads is oxidized to diffusion-bonded blue-black or black oxidized zirconium.
13. (currently amended) The vertebral disc prosthesis of claim 11 wherein the irregular surface structure comprises wire mesh connected to the outer surface of said at least one component ~~the prosthesis body~~, wherein at least a portion of the surface of the mesh is oxidized to diffusion-bonded blue-black or black oxidized zirconium.
14. (original) The vertebral disc prosthesis of claim 11 wherein the irregular surface structure comprises a textured surface.
15. (original) The vertebral disc prosthesis of claim 11 wherein the irregular surface structure comprises anchoring projections or teeth.